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**TO: Commissioner for Patents, Mail Stop Appeal Brief, Examiner Jenna L. Davis  
- United States Patent and Trademark Office**

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**FROM: Bridget Brinkman (Typed or printed name of person signing Certificate)**

Fax No. 513-634-3848

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Application No.: 10/785,464

Inventor(s): Maurizio Tamburro et al.

Filed: February 24, 2004

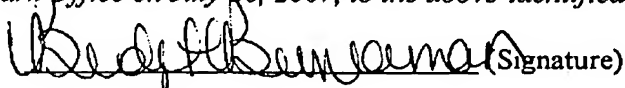
Docket No.: CM2601MC

Confirmation No.: 8597

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- 1) Substitute Appeal Brief (13 pages)

Number of Pages Including this Page: 14

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/785,464  
Inventor(s) : Maurizio Tamburro et al.  
Filed : February 24, 2004  
Art Unit : 1771  
Examiner : Jenna L. Davis  
Docket No. : CM2601MC  
Confirmation No. : 8597  
Customer No. : 27752  
Title : ABSORBENT ARTICLE WITH FILM-LIKE REGION  
OF CHITOSAN MATERIAL AND PROCESS FOR  
MAKING THE SAME

**SUBSTITUTE APPEAL BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

This Substitute Appeal Brief is filed pursuant to the Notice of Non-Compliant Appeal Brief dated July 11, 2007 and is an appeal from the decision communicated in the Office Action mailed on October 18, 2006.

A timely Notice of Appeal was filed on January 16, 2007.

**REAL PARTY IN INTEREST**

The real party in interest is The Procter & Gamble Company of Cincinnati, Ohio.

**RELATED APPEALS AND INTERFERENCES**

There are no known related appeals, interferences, or judicial proceedings.

**STATUS OF CLAIMS**

Claims 1-12 are rejected.

Claims 13-31 are canceled.

Claims 1-12 are appealed.

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A complete copy of the appealed claims is set forth in the Claims Appendix attached herein.

#### STATUS OF AMENDMENTS

No amendment was filed subsequent to the response August 1, 2006.

#### SUMMARY OF CLAIMED SUBJECT MATTER

Independent Claim 1, the rejection of which is appealed, is to a disposable absorbent article. The disposable absorbent article comprises a liquid pervious topsheet. The disposable absorbent article comprises a liquid impervious backsheet. The disposable absorbent article comprises an absorbent member positioned between the topsheet and the backsheet. (see e.g. page 5, lines 19-30). The absorbent article has a thickness dimension. The absorbent member has a first surface being oriented towards the topsheet and an opposed second surface being oriented towards the backsheet, the second surface being separated from the first surface by the thickness dimension. (see e.g. page 6, lines 6-9). The absorbent member comprises at least one continuous and homogeneous region of a sprayed on layer of particles of chitosan material. (see e.g. FIGS. 2 and 3 and page 13, lines 20-24). The chitosan material spans across void spaces located on or within the absorbent material and at least partially covers the constituent materials of the absorbent material. (see e.g. FIGS. 2 and 3 and page 13, lines 23-28). The particles of chitosan have a particle size distribution with a mean diameter  $D(v,0.9)$  of not more than about 300  $\mu\text{m}$ . (see e.g. page 15, lines 5-7). At least 1 gram of the chitosan material is soluble in 100 grams of water at 25°C and one atmosphere. (see e.g. page 9, lines 28-30).

#### GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kelkenberg (U.S. Patent No. 5,496,933) in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569).

Claims 1-12 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,833,487 in view of Kellenberger et al. and Sackmann et al.

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Claims 1-12 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-24 of U.S. Patent No. 6,867,287 in view of Kellenberger et al. and Sackmann et al.

Claims 1-12 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-21 of U.S. Patent No. 6,887,564 in view of Kellenberger et al. and Sackmann et al.

Claims 1-12 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-20 of copending Application 11/021,634 in view of Kellenberger et al. and Sackmann et al.

#### ARGUMENTS

##### Rejection Under 35 U.S.C. § 103(a) Over Kelkenberg in view of Kellenberger et al. and Sackmann et al.

Claims 1-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kelkenberg (U.S. Patent No. 5,496,933) in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569). This rejection is traversed for two reasons.

First, the references, when combined, fail to teach or suggest a continuous and homogeneous region of chitosan. In the present application, the structure of the continuous and homogeneous region of chitosan is analogous to the structure of a layer of salt created in the bottom of a glass by allowing a glass of salt water to dry over many days. When a glass of salt water is allowed to dry over many days, the water evaporates from the glass, leaving behind a layer of salt at the bottom of the glass. The layer of salt formed on the bottom of the glass is continuous and homogeneous. Many of the particles of salt are linked to adjacent particles of salt. The salt at the bottom of the glass has a structure that is distinct from that of grains of salt, even very small grains of salt, poured into a dry glass to form a layer of salt at the bottom a glass. For grains of salt poured into a dry glass, the grains are finely dispersed. In the present application, as can be seen in Figures 2 and 3, the particles of chitosan are not finely dispersed. Rather the particles of chitosan form a continuous and homogeneous region of chitosan material.

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The Office Action cites Figure 3 of Kellenberger et al. as disclosing a continuous and homogeneous region of a superabsorbent. As can be observed in the zoomed in portion of Figure 3 of Kellenberger et al., granules of superabsorbent are illustrated as circles. The granules of superabsorbent in Figure 3 of Kellenberger et al. are spaced apart from one another, with few granules of superabsorbent in contact with adjacent granules of superabsorbent. The granules of superabsorbent in Kellenberger et al. are not a continuous and homogeneous region, as claimed in the present application.

Kelkenberg, Column 2 lines 25-27, describes the chitosan as a powder. Sackmann et al. (Column 4 lines 61-62) also describes the superabsorbent polymer disclosed therein as a powder. Similarly, Kellenberger et al. (Figures 2-6) illustrates the superabsorbent polymer disclosed therein as a powder. The powders of Kelkenberg, Kellenberger et al., and Sackmann et al. are like grains of dry salt poured into a dry glass, as discussed above, and do not form a continuous and homogeneous region like that claimed and shown in FIGS. 2 and 3 of the present application. Therefore, the Applicants submit that Claim 1 is allowable over Kelkenberg in view of Kellenberger et al. and Sackmann et al.

Second, the Office Action fails to identify portions of Kelkenberg, Kellenberger et al., and Sackmann et al., that when combined, teach or suggest a chitosan material wherein 1 gram of the chitosan material is soluble in 100 grams of water at 25°C and one atmosphere. The Office Action on Page 6, lines 10-11 states that "it is reasonable to presume that said limitations are inherent to the invention." The Examiner has failed to provide rationale or evidence tending to show inherency, as required by the Manual of Patent Examining Procedure (MPEP) § 2112(IV) (8th Ed. Including May 2004 Revisions). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency . . . may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-1951 (Fed. Cir. 1999) (citations omitted) (emphasis added). Rather, "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

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The Office Action has failed to provide rationale or evidence that supports the Office Action's statement that the matter set forth in Claim 1 of the present application is "presumed" to be inherent in Kelkenberg. Therefore, the Applicants submit that Claim 1 is patentable over Kelkenberg in view of Kellenberger et al. and Sackmann et al. The Applicants respectfully request that Claim 1 be allowed on appeal.

Because Claims 2-12 depend upon Claim 1, the Applicants submit that Claims 2-12 are also allowable over Kelkenberg in view of Kellenberger et al. and Sackmann et al. The Applicants respectfully request that Claims 2-12 be allowed on appeal.

#### Double Patenting Rejections

##### U.S. Patent No. 6,833,487 in view of Kellenberger et al. and Sackmann et al.

Claims 1-12 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,833,487 in view of Kellenberger et al. and Sackmann et al. Claim 1 recites a "continuous and homogeneous" region of chitosan "wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere." The Applicants submit that Claim 1 is patentable over Claims 1-15 of U.S. Patent No. 6,833,487 in view of Kellenberger et al. and Sackmann et al. because the references, when combined, fail to teach or suggest an absorbent member comprising at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.

Claims 1-15 of U.S. Patent No. 6,833,487 fail to teach or suggest an absorbent member comprising at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere. Combining the Kellenberger et al. and Sackmann et al. references with Claims 1-15 of U.S. Patent No. 6,833,487 fails to cure the deficiency of Claims 1-15 of U.S. Patent No. 6,833,487. As discussed above in regard to the rejection under 35 U.S.C. § 103(a), Kellenberger et al. fails to disclose a continuous and homogeneous region of a superabsorbent. The Office Action does not cite any portion of Sackmann et al. that teaches or suggests at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of the chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.

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The Applicants submit that Claim 1 is patentable over Claims 1-15 of U.S. Patent No. 6,833,487 in view of Kellenberger et al. and Sackmann et al. The Applicants respectfully request that Claim 1 be allowed on appeal.

Because Claims 2-12 depend upon Claim 1, the Applicants submit that Claims 2-12 are also allowable over Claims 1-15 of U.S. Patent No. 6,833,487 in view of Kellenberger et al. and Sackmann et al. The Applicants respectfully request that Claims 2-12 be allowed on appeal.

U.S. Patent No. 6,867,287 in view of Kellenberger et al. and Sackmann et al.

Claims 1-12 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-24 of U.S. Patent No. 6,867,287 in view of Kellenberger et al. and Sackmann et al. Claim 1 recites a "continuous and homogeneous" region of chitosan "wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere." The Applicants submit that Claim 1 is patentable over Claims 1-24 of U.S. Patent No. 6,867,287 in view of Kellenberger et al. and Sackmann et al. because the references, when combined, fail to teach or suggest an absorbent member comprising at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of the chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.

Claims 1-24 of U.S. Patent No. 6,867,287 fail to teach or suggest an absorbent member comprising at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere. Combining the Kellenberger et al. and Sackmann et al. references with Claims 1-24 of U.S. Patent No. 6,867,287 fails to cure the deficiency of Claims 1-24 of U.S. Patent No. 6,867,287. As discussed above in regard to the rejection under 35 U.S.C. § 103(a), Kellenberger et al. fails to disclose a continuous and homogeneous region of a superabsorbent. The Office Action does not cite any portion of Sackmann et al. that teaches or suggests at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.

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The Applicants submit that Claim 1 is patentable over Claims 1-24 of U.S. Patent No. 6,867,287 in view of Kellenberger et al. and Sackmann et al. and the Applicants respectfully request that Claim 1 be allowed on appeal.

Because Claims 2-12 depend upon Claim 1, the Applicants submit that Claims 2-12 are also allowable over Claims 1-24 of U.S. Patent No. 6,867,287 in view of Kellenberger et al. and Sackmann et al. The Applicants respectfully request that Claims 2-12 be allowed on appeal.

U.S. Patent No. 6,887,564 in view of Kellenberger et al. and Sackmann et al.

Claims 1-12 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-21 of U.S. Patent No. 6,887,564 in view of Kellenberger et al. and Sackmann et al. Claim 1 recites a "continuous and homogeneous" region of chitosan "wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere." The Applicants submit that Claim 1 is patentable over Claims 1-21 of U.S. Patent No. 6,887,564 in view of Kellenberger et al. and Sackmann et al. because the references, when combined, fail to teach or suggest an absorbent member comprising at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of the chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.

Claims 1-21 of U.S. Patent No. 6,887,564 fail to teach or suggest an absorbent member comprising at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere. Combining the Kellenberger et al. and Sackmann et al. references with Claims 1-21 of U.S. Patent No. 6,887,564 fails to cure the deficiency of Claims 1-21 of U.S. Patent No. 6,887,564. As discussed above in regard to the rejection under 35 U.S.C. § 103(a), Kellenberger et al. fails to disclose a continuous and homogeneous region of a superabsorbent. The Office Action does not cite any portion of Sackmann et al. that teaches or suggests at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.



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The Applicants submit that Claim 1 is patentable over Claims 1-21 of U.S. Patent No. 6,887,564 in view of Kellenberger et al. and Sackmann et al. The Applicants respectfully request that Claim 1 be allowed on appeal.

Because Claims 2-12 depend upon Claim 1, the Applicants submit that Claims 2-12 are also allowable over Claims 1-21 of U.S. Patent No. 6,887,564 in view of Kellenberger et al. and Sackmann et al. The Applicants respectfully request that Claims 2-12 be allowed on appeal.

U.S. Patent Application No. 11/021,634 in view of Kellenberger et al. and Sackmann et al.

Claims 1-12 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-20 of copending Application 11/021,634 in view of Kellenberger et al. and Sackmann et al. Claim 1 recites a "continuous and homogeneous" region of chitosan "wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere." The Applicants submit that Claim 1 is patentable over Claims 1-20 of copending Application 11/021,634 in view of Kellenberger et al. and Sackmann et al. because the references, when combined, fail to teach or suggest an absorbent member comprising at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of the chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.

Claims 1-20 of copending Application 11/021,634 fail to teach or suggest an absorbent member comprising at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere. Combining the Kellenberger et al. and Sackmann et al. references with Claims 1-20 of copending Application 11/021,634 fails to cure the deficiency of Claims 1-20 of copending Application 11/021,634. As discussed above in regard to the rejection under 35 U.S.C. § 103(a), Kellenberger et al. fails to disclose continuous and homogeneous region of a superabsorbent. The Office Action does not cite any portion of Sackmann et al. that teaches or suggests at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.

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The Applicants submit that Claim 1 is patentable over Claims 1-20 of copending Application 11/021,634 in view of Kellenberger et al. and Sackmann et al. The Applicants respectfully request that Claim 1 be allowed on appeal.

Because Claims 2-12 depend upon Claim 1, the Applicants submit that Claims 2-12 are also allowable over Claims 1-20 of copending Application 11/021,634 in view of Kellenberger et al. and Sackmann et al. The Applicants respectfully request that Claims 2-12 be allowed on appeal.

SUMMARY

In view of all of the above, it is respectfully submitted that Claims 1-12 are allowable. The Applicants respectfully request that Claims 1-12 be allowed on appeal.

Respectfully submitted,

THE PROCTER & GAMBLE COMPANY



Signature

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Date: July 26, 2007

Customer No. 27752

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#### CLAIMS APPENDIX

1. A disposable absorbent article comprising:  
  
a liquid pervious topsheet; a liquid impervious backsheet; and an absorbent member positioned between said topsheet and said backsheet, said absorbent member having a thickness dimension, a first surface being oriented towards said topsheet and an opposed second surface being oriented towards said backsheet, said second surface being separated from said first surface by said thickness dimension, said absorbent member comprises at least one continuous and homogeneous region of a sprayed on layer of particles of chitosan material, wherein said chitosan material spans across void spaces located on or within the absorbent member and at least partially covers constituent materials of the absorbent material, wherein said particles of chitosan have a particle size distribution with a mean diameter  $D(v,0.9)$  of not more than about 300  $\mu\text{m}$ , wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.
2. The absorbent article of claim 1, wherein said region is positioned on said first and/or second surface of said absorbent member.
3. The absorbent article of claim 2, wherein the surface area coverage of chitosan material within said region of particles of chitosan material on said surface of said absorbent member is at least about 75% of the total surface of said region.
4. The absorbent article of claim 3, wherein the surface area coverage of chitosan material within said region of particles of chitosan material on said surface of said absorbent member is about 100% of the total surface of said region.

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5. The absorbent article of claim 1, wherein said article further comprises an additional absorbent member positioned between said region and said backsheet and/or said topsheet.
6. The absorbent article of claim 1, wherein said region comprises chitosan particles having a particle size distribution with a mean diameter  $D(v,0.9)$  of from about 10 nm to about 300  $\mu\text{m}$ .
7. The absorbent article of claim 1, wherein said chitosan material has a degree of deacetylation of more than about 70%.
8. The absorbent article of claim 1, wherein said chitosan material comprises at least one salt of chitosan.
9. The absorbent article of claim 1, wherein said absorbent member comprises a structure with internal void space, preferably a dry laid hydrophilic fibrous web.
10. The absorbent article of claim 1, wherein said region comprises particles of chitosan material in an amount of about 0.1 to about 200 g per square meter of said absorbent member.
11. The absorbent article of claim 2, wherein at least one of said surfaces of said absorbent member is covered by at least about 40% of the total surface area of said surface with said regions comprising particles of chitosan material.
12. The absorbent article of claim 11, wherein at least one of said surfaces of said absorbent member is covered by about 100% of the total surface area of said surface with said regions comprising particles of chitosan material.

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EVIDENCE APPENDIX

None

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RELATED PROCEEDINGS APPENDIX

None